

Accessory and Garage Journal



NEW HOME OF WALDEN-WORCESTER - INC.

WALDEN-WORCESTER, INCORPORATED

FIFTEEN years have rolled by since the start of Walden-Worcester, Inc., then known as Walden Manufacturing Co. From a business consisting of one small invention, employing three men, it has grown to a large modern factory employing 300.

To consider the actual growth of the company by comparison of employees hardly gives a real conception of its extension. In 1906 the production of wrenches, which included one type of ratchet wrench, was not in excess of 5000. In 1920 the 4,500,000 mark was reached.

If it were possible to turn back time for a moment to 1906, and make inquiries of a thousand dealers or jobbers whether they knew Walden-Worcester or what they manufactured, the prevailing answer would be in the negative. If the same 1000 dealers and jobbers are asked today about Walden-Worcester, these two words would be instantly connected with the word wrenches.

It might be well at this point to say a few words of the history of the company during the past 15 years. The corporation was organized and incorporated in 1906 by F. E. Walden and associates. Mr. Walden was the patentee of the wire handle ratchet wrench. The corporation was organized to manufacture that tool. Wire handle ratchet wrenches today do not represent more than two per cent. of the actual production.

In 1907 Mr. Warren S. Bellows bought out F. E. Walden and associates. On Dec. 31, 1916, the name of the concern was changed to Walden-Worcester, Inc., but there was no change in personnel.

From the small beginning of a few types of tools, the history of the company shows many additions, among these such leaders as the original "Toma-hawk," and the fourth connecting rod wrench for Ford cars. Probably most everyone has used a so-called single-loop tee handle wrench on demountable rims. This wrench was designed by Walden-Worcester and has been sold to rim companies since 1913. A more detailed resume of the history of the company would prove to the general public that the line as now sold is entirely of original Walden-Worcester design.

In 1919 the growth of the business was such that the concern was operat-

ing in 15 small buildings. It was therefore decided to build a large building and have the plant all under one roof. In September, 1919, ground was broken for building and completion of the structure promised Jan. 1, 1920. It was not, however, until October, 1920, that partial occupancy of the new building was possible.

The factory is particularly well situated, facing on a double boulevard 120 feet wide, serving as a main artery of travel between Boston and New York. Directly behind the plant the Boston & Albany tracks furnish a through western line connecting with the New York Central railroad. This assures a spur track being laid in the near future, drawing having already been approved.

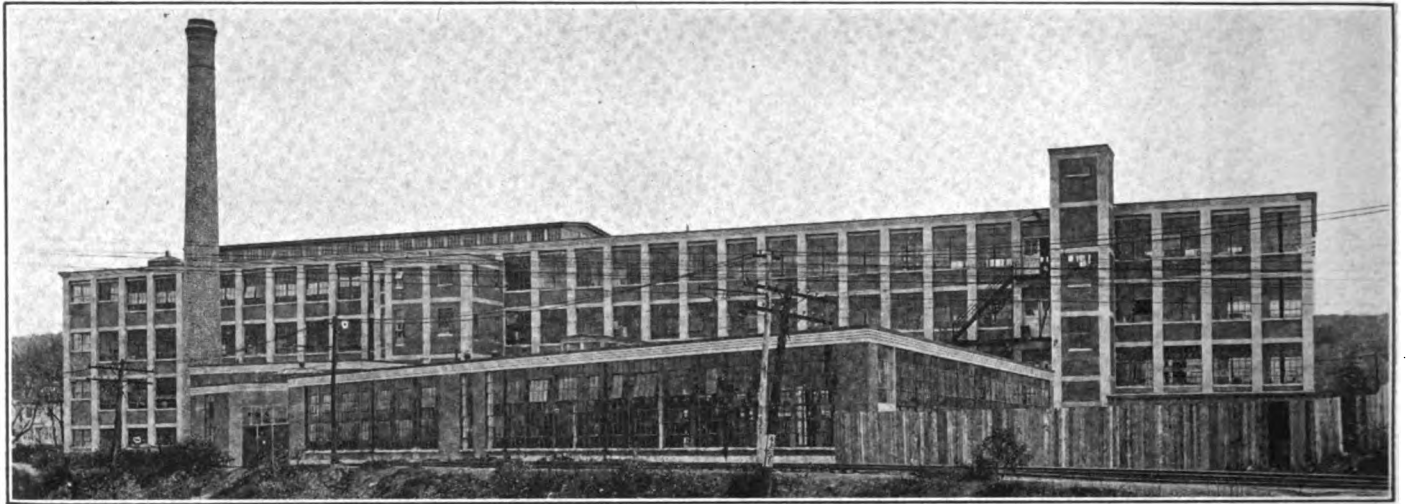
The building has approximately 2½ acres of floor space, equal to one city block. The main building is 330 feet long and four stories high. It is made of slow burning mill type construction with concrete piers, brick walls, wood cross beams and floors. All floors are given ample light by the use of Lupton glass sash aided by mill white paint.

A one-story addition in the rear, running parallel to the main factory, is used for plating, finishing, heat treatment, garage, boilers and electric transformer room.

On the fourth floor of the main building the general offices of the plant are located. They are somewhat novel in arrangement, having the small offices of certain departments on each side of the building and through the center, a space of 14 by 100 feet, the general offices. These offices are used for such work as orders, invoices and clerical work, and are lighted from a monitor above, which



Warren S. Bellows, General Manager, Walden-Worcester



Rear View of Modern Factory of Walden-Worcester, Inc. This Four-Story Plant Contains Every Facility for the Efficient Manufacture of Socket Wrenches.

furnishes ventilation by automatically worked windows. This gives each person equal light and air.

In one end of the upper floor is located the restaurant, recreation room and kitchen. The latter has capacity to serve the employees of the factory.

The office is designed to take care of the company's growth for the next five years. It was planned that the manufacturing part of the business could be extended by lengthening the building.

There is located in one end of the building a fireproof tower 10 by 20 feet, separated from the main building by 14 inches of hollow tile. This arrangement gives a fireproof vault on each floor. On the fourth floor this is used as the active filing department, on the third for inactive files, on the second as an engineering department, and also for safe keeping of valuable tracings, and on the first to store maintenance supplies.

The third floor is occupied by the shipping and finished stock room. Finished stock is carried in steel racks, covering a space of 300 by 20 feet. Each rack is 19 feet long, having four shelves. The floors are divided into bays, each one numbered, which allows finished stock to be placed systematically in the same rotation as the orders are entered. Shipping more than 150 different types of wrenches, this method is necessary for proper handling of the orders.

Special mention should be made of the tremendous quantity of paper cartons necessary for boxing wrenches.

One million boxes were made last year by our special metal staying machines. The use of a metal edge box has greatly helped the strength of the boxes and improved the looks of the boxes on the jobbers' and dealers' shelves. Paper box material is carried in stock, flat, properly lithographed, which eliminates old fashioned methods of pasting on labels.

Orders are assembled on special trucks which are rolled directly to the packers.

Each case as completed is placed on a spiral gravity chute, which carries it to a covered loading platform on the ground floor or directly into freight cars. The loading platform permits two trucks to load

at the same time. With the system now practised wrenches flow without interruption from finished stock bins to carriers.

On the second floor the most important part of the manufacturing is carried on. The equipment of this floor embodies ideas which have taken years to perfect. Special bending machines, socket assemblers, milling, drilling and working machinery, included with equipment, have been especially adapted for the manufacture of socket wrenches. This floor also carries the tool crib, which keeps special jigs and fixtures for drills and milling machines, as well as a very well equipped tool room to make jigs, fixtures and special tools.

Factory offices are located in one end of this floor, which include works manager and superintendent's office, drafting, cost department, time keeping and other departments. A large, airy, clean locker room, with all modern appliances for washing up takes up the remainder of the space on this floor. Each employee has an individual locker in which he keeps his clothes, lunch and other of his things that he may desire.

On the first floor is located the unfinished stock, receiving department, automatic screw machines, presses, rod cut-

ters and other miscellaneous machinery.

Passenger elevators, freight elevators, electric controlled clocks and time recorders are included in the regular equipment of the plant. There is also a great deal of special equipment, such as box trucks, overhead trolley track and conveyor.

Running lengthwise of the building above the center aisle is a one-ton capacity overhead trolley track and hoists. Two methods are used in the factory to hold material, one a wheel box truck about two feet long by 18 inches wide by 18 inches deep and the other is small metal piling, or "tote" pans. Both trucks and pans are moved with help of trolley track and hoist.

A special electric belt type conveyor carries tools to be finished from the second floor of factory through a water proof tunnel underground to the first floor of the rear building. Tools are then nickel plated and sent by conveyor underground and up to third floor of main building for shipment or stock.

A dumb waiter connects floors one, two and three with stock room, giving quick service to each floor.

Product.

Walden-Worcester's principle product



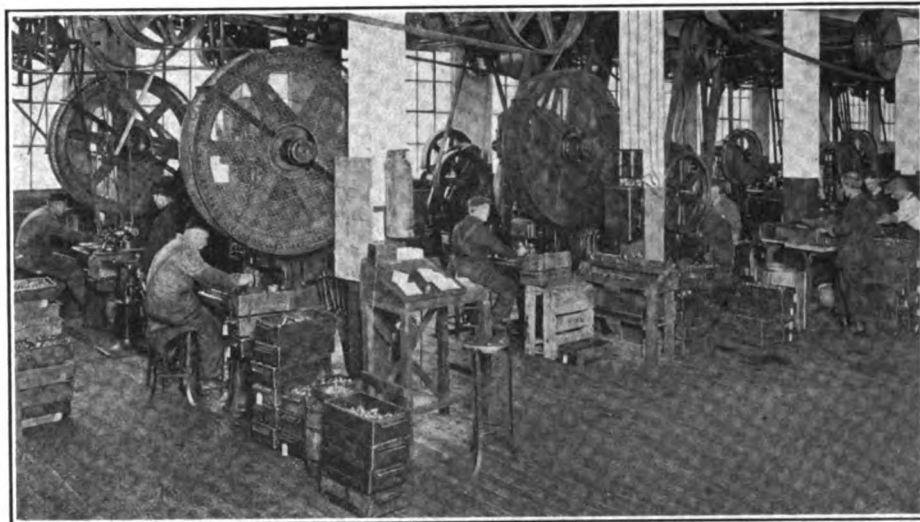
The Main Offices Are Ideally Arranged and Admit Ample Light and Air.

consists of socket wrenches, although it includes valve grinders and a few stamped open end wrenches. The term socket wrench may not mean a great deal to most people, although every automobile owner who has changed a tire on cars equipped with demountable rims, knows that it is a socket wrench which he uses to remove the nuts which clamp the rim to the wheel. Walden-Worcester furnishes more than half the rim tools which are used for equipment on new cars. A brace socket wrench or tee handle socket wrench comes as equipment with almost every make of car, because it is the fastest tool which may be used to remove these many nuts. With some car owners the use for a socket wrench ends here, but many others, and all garage mechanics know that the application of socket wrenches to most all forms of assembly or disassembly work saves time and insures long life to the nut or bolt head.

The automobile is the most popular example of modern compact machinery. In the building of compact machinery some parts are bound to be quite inaccessible, and whereas it would be impossible to use an ordinary adjustable, or open end wrench on many of these parts, the wire handled socket wrench may be used. This is true because the socket wrench grips the nut on every side so that the six thin walls of the socket replace the two heavy jaws of adjustable or open end wrenches; also because the wire handle may be bent into any desired shape and good leverage may be obtained, that would be impossible with any other type of wrench.

So it may be seen that socket wrenches have two great uses. First, to speed up work in accessible places by the use of brace socket wrenches or tee handled socket wrenches, and second, to reach the inaccessible nuts and bolts by special types of offset handles.

The first wire handled socket set which was offered to the automotive trade was that for the Ford car. This met with so great a demand that car



Power Press Room. Note the Screen-Like Arrangement, Which Prevents Accident to Operator.

sets were added to the line for the Overland, Buick and Dodge cars, then still later sets were added for the Chevrolet, Maxwell and the Fordson tractor. These sets were composed of from four to six tools. Although these particular tools were designed for use on these certain makes of cars, some of the tools were applicable to certain places on other makes of cars. Besides the automotive work, which has been the largest field with Walden-Worcester, they have made wrenches for companies manufacturing looms, steel sash, steel vaults, Pullman cars, automatic screw machines, air compressors, mining engines, etc.

How Wrenches Are Made.

It will probably be interesting to tell some of the operations through which the tools pass in the making. The 10-foot bars of steel are placed in Gridley automatic screw machines and are turned, drilled and cut off, coming out almost a finished socket except for the broaching. These screw machine parts pass from the automatic screw machines to the high powered presses, which broach or punch the hex or square open-

ing, as well as the opposite end of the sockets to receive the handle, such as the tee and speed wrenches. The other type of sockets, such as used on the Tomahawk or double end offset wrenches, are drilled in the side to receive the handle.

Those sockets which are to be heat treated then go to the heat treating department under the direction of a metallurgist, being treated in one of the latest type of automatic movable floor furnaces. After heat treating these sockets are sent to the assembling department.

In the meantime the handles are prepared to receive the sockets as follows: The wire for the handles comes in the form of large coils, which necessitates that the wire should be run through a straightening and cutting machine in which the wire is cut into the proper lengths.

Next the rod is slabbed to receive the socket. It is then marked with the stamp of the manufacturer. These rods are then formed on powerful benders in the shape of speed wrenches, tee handle wrenches or whatever shape or form they are to take. Then the sockets are pressed on to these handles and securely fastened.

These tools are then conveyed by an automatic conveyor to the plating department. Here is installed the most complete plating equipment that can be obtained. This machine is one of five in the whole United States and having been the last one built has many qualities not found in the others. The cost of this particular installation was approximately \$30,000, and it has a capacity of 40,000 tools a day.

The tools are automatically conveyed from one vat to another so that the wrenches receive successive coats of zinc, copper and nickel. The result is a finished product that presents a clean looking and most attractive nickel finish in keeping with the high character of the tools. These tools again go to the automatic conveyor, which carries them to the stock bins.



Drill Press Room. Conveyors in Foreground Are Used to Carry Product to Different Departments.



Stock Room and Shipping Department. Wrenches in Foreground Have Just Come from Nickeling Bath.

Sales.

Walden-Worcester sales can be divided into three classes: Manufacturers, jobbers and export.

Manufacturers' Sales.

Manufacturers' sales, although representing a small portion of the total volume, take a largely diversified class of industries. Manufacturers' business can be divided into three main groups: Assembly, equipment and service. By assembly is meant tools for assembling machines. By equipment is meant operator tools for adjustment of machines, or rim tools that go with an automobile. Under the heading of service work are tools used for repair work, generally sold through regular jobbers, although sometimes recommended by manufacturers.

The possibilities of tools for use as equipment are greater than the average conception. Such machines as screw machines, lathes, looms and others all need tools for minor adjustments. Manufacturer's equipment work is only in its infancy with this concern.

Jobbers' Sales.

The sale of standard wrenches to automotive and hardware jobbers in the country represents the volume of Walden-Worcester business. Selling approximately 750 jobbers, located in every state in the country, it is very easy to see the possibilities of this branch of sales work. The jobbing business covering the United States so thoroughly keeps fairly constant in volume, as it is not local in its character. This branch of business represents 80 per cent. of Walden-Worcester's total volume.

In order to carry out this work and get the best cooperation from wholesalers, the company has branch offices located in New York, San Francisco, Chicago and Winnipeg, and from these offices travel 14 salesmen, who call on the jobbers. The work of the salesmen is not only to sell wrenches, but to give the jobber service, see that he has the proper stock on his shelves, assist him in taking stock, and to work with his sales manager and advertising manager

to see that the product is sold and the proper turnover is obtained.

Each one of these branch offices is supplied with copies of orders and invoices as sent out by the home office. The home office and the branch offices exchange copies of all correspondence so that each branch office has a complete file of the business in its territory. Besides regular salesmen the company travels missionary men whose duty it is to give information to dealers as to the various uses of Walden-Worcester wrenches and by explaining additional uses of tools, help to increase the sales for jobbers. These missionary men will also assist dealers in making up special window displays, suggestions of which they will have in the form of pictures of displays. This particular work is only of recent inception, but from results obtained so satisfactory that this feature has been planned on a much larger scale.

It is perhaps well at this point to call attention to one predominant feature of Walden-Worcester's sales policy. Each tool is guaranteed to give satisfactory service. All defective or imperfect tools

are always replaced or repaired free of charge. The guarantee is broad enough so that there is no possibility for any misunderstanding.

Walden-Worcester's biggest distributing city is St. Louis, although cities of Chicago and San Francisco are the next in importance. Merely because they are distributing cities does not necessarily mean that the tools are sold there, for some of the large hardware and automotive equipment houses in these cities sell to all parts of the country.

Export Sales.

Walden-Worcester, Inc., almost from its very organization has been keenly alert to the possibilities and the advantages of the widest possible distribution of its products. It was but natural therefore that attention was early given to the opportunity for sales extension in America's overseas markets.

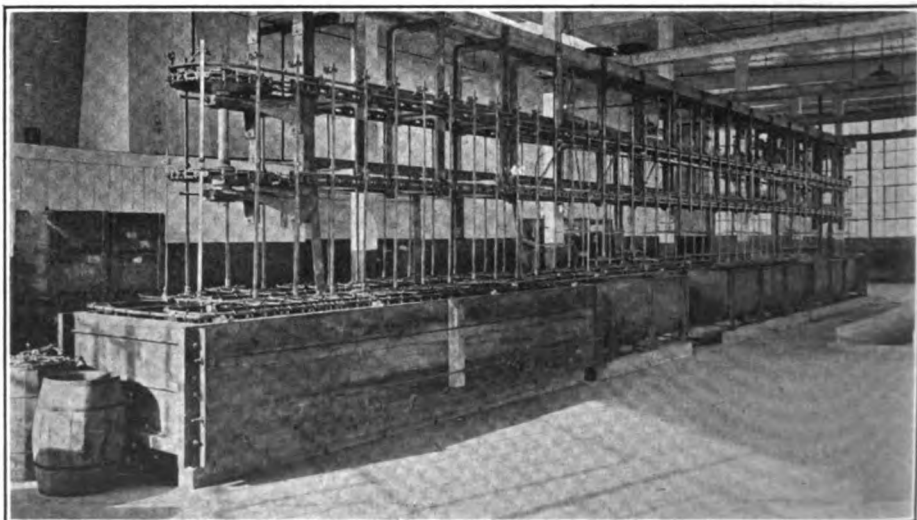
During the period of the world war these efforts were necessarily much restricted in many directions. Difficulties in securing sufficient supplies of raw materials, and the shortage of shipping space to most countries that were then good prospective markets, imposed a serious handicap and made it almost out of the question to carry out any general plan for the extension of foreign sales.

However, almost immediately after the signing of the armistice in November, 1918, steps were taken to organize an export department. The measure of all the principal overseas markets was taken and aggressive development started along the lines of a well defined, consistent, liberal export sales policy.

Wherever American automotive equipment or other mechanical equipment has been introduced—there one will also find a market for Walden-Worcester motor, mechanics', garage and engineers' hand tools.

As a result the volume of Walden-Worcester wrenches that now goes abroad represents quite an appreciable percentage of the company's total sales.

Last year shipments were made to over 40 different countries—the large volume going to the important markets of



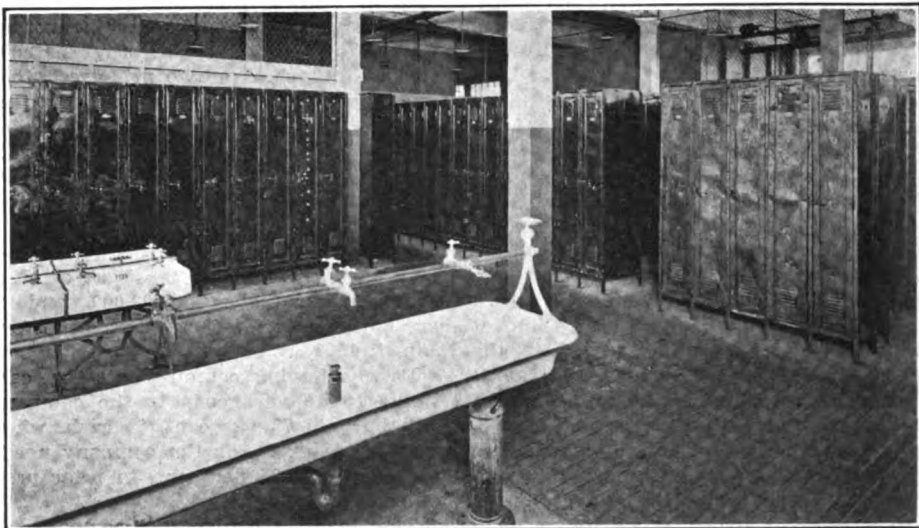
The Nickel Plating Bath Is of Modern Construction. It Does Work for Which 30 Men Were Formerly Required.

Scandinavia, New Zealand, Australia, South Africa, the West Indies and South American countries. Other smaller, but quite as important shipments went to many less frequently thought of territories, such as Siam, Algeria, Poland, Morocco, Arabia and others.

The Walden-Worcester idea of quality, service and fair treatment that has brought success in the domestic market has proven equally successful in the conquest of the more distant fields. It bids fair for a truly world wide distribution, with the gradual return of business confidence now evident throughout the world.

Advertising and Promotion.

The Walden-Worcester display board has been a leader in advertising the wrenches and making sales for the dealer; a silent salesman that almost talks. The display board, six feet high by two feet wide, with black and goldenrod stripings on a metal panel, set off by the Walden-Worcester "Bull's Eye," holding approximately 100 tools suspended from hooks, has become a recognized fixture in 20,000 dealers' stores. The trade mark, a goldenrod and black bull's eye of Walden-Worcester, has been regis-



This Well Appointed Lavatory and Coat Room Is Greatly Appreciated by Employees.

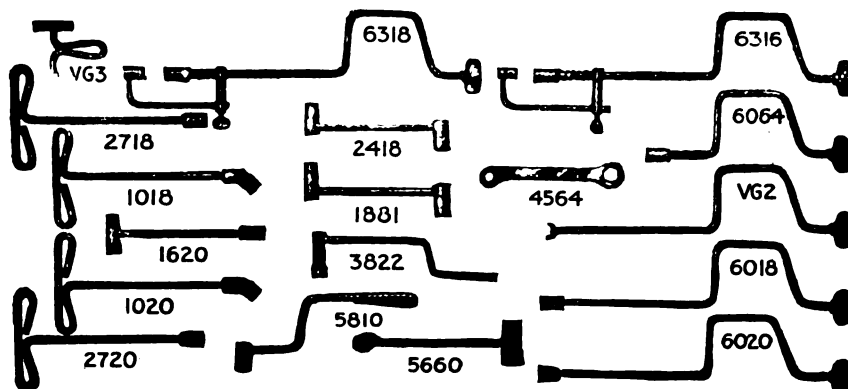
tered in the United States and approximately 50 foreign countries.

The educational phase has been no small part of advertising propaganda and to this end a total of 50,000 booklets of 128 pages were distributed last year, showing use of wrenches on Ford cars, trucks and Fordson tractors. The Ford

manual is a most complete instruction book and the illustrations mark a new departure in instruction books.

Educational work has become an established part of advertising and is the pioneer effort of the sales force to teach its potential customers what they should look for in wrench equipment.

70 VILL
ABOOLAO



Wrenches designed especially for work on Ford Cars are a specialized Walden-Worcester product. These tools, sold singly or in combinations to meet the needs of owners, garages, service stations or shops, have practically universal use.

The series illustrated will serve nearly every requirement for Ford Car adjustment, repair and overhaul.

A Walden-Worcester agency means the establishment of a department that will meet a constantly increasing demand for highest grade dependable tools.

*It is worth while for every dealer
to write for our 1920 catalogue.*

WALDEN-WORCESTER, Inc.

GENERAL OFFICES AND FACTORIES
WORCESTER, MASS.

CHICAGO
452 MONADNOCK BUILDING

NEW YORK
295 BROADWAY

SAN FRANCISCO
457 MONADNOCK BUILDING